DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

GREG GIANFORTE, GOVERNOR
1539 ELEVENTH AVENUE

STATE OF MONTANA

DIRECTOR'S OFFICE: (406) 444-2074
FAX: (406) 444-2684
PO BOX 201601
HELENA, MONTANA 59620-1601

FINAL - No Significant Impact

ENVIRONMENTAL ASSESSMENT

Project Name:	Eastgate Village Water System Improvements Phase 1
Proposed Implementation Date:	July/August 2022
Proponent:	Eastgate Village Water and Sewer User's Association
Location:	46.592, -111.889
County:	Lewis and Clark

I. TYPE AND PURPOSE OF ACTION

The purpose of the project is to protect public health and safety for Eastgate residents and improve the system's resilience to climate change. The goal includes supplying adequate water during maximum demands and power outages as well as to construct a new pumphouse with booster pump bypass capabilities for a reliable, efficient supply of water.

Eastgate Village Water and Sewer User's Association is comprised of Eastgate I and Eastgate II. Eastgate borders the southeast edges of the East Helena City limits. The Association currently services 688 single and multi-family unit residential service connections that are ¾" for the water system. The Association's water supply system consists of a total of seven supply wells and is currently unable to meet water system demands. As of July 2021, water production has decreased by 33% within the last year. Eastgate surrounds the existing Eastgate Elementary school, and a significant population of the East Helena community and surrounding schools lives in the Association.

The project proposes to construct a new deep aquifer production well to replace the three shallow aquifer wells that have been recently taken offline (as they are not producing water). This replacement will also work to meet system demands and improve the Association's resilience to climate change. In addition, the Association proposes to install approximately 1,400 lineal feet of new 8" transmission main required for the new production well. The Association will also install a new backup generator with an automatic transfer switch. This backup generator is expected to run the pumphouse boosters and at least one main supply well during power outages.

The Association also proposes to construct a new pumphouse with all new mechanical and electrical. The pumphouse will include bypass capabilities and access for routine booster pump maintenance and an overhead lifting crane for maintenance on booster pumps. The Association will also replace the current mercury switch monitors for water tank level reads with a pressure transducer level and flow meters. The new transmission main and associated piping and appurtenances would also be installed with the pumphouse. A room for a disinfection system would be incorporated into the new building footprint should the Association need to incorporate disinfection treatment into their system in the future.

The Association expects to begin construction and well drilling Summer 2022.

DNRC will approve the grant to provide funding for the Lewis and Clark County Eastgate Village Water System Improvements Phase 1 ARPA project.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

Provide a brief chronology of the scoping and ongoing involvement for this project. List number of individuals contacted, number of responses received, and newspapers in which notices were placed and for how long. Briefly summarize issues received from the public.

The project has been presented at Association meetings and made available for public comment. In addition, the applicant provided letters of commitment from the Lewis and Clark County Board of Commissioners and the Eastgate Water and Sewer User's Association.

DNRC will post a draft of this Environmental Assessment for public comment for 30 days on the DNRC – Public Notices webpage. In addition, the MEPA Coordinator will provide a letter of notice for public comment to the applicant for posting in a local newspaper or website outlet.

For any comments submitted by the public, the MEPA Coordinator will review and work with the Grant Manager and applicant to adequately address those comments.

2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

Examples: cost-share agreement with U.S. Forest Service, 124 Permit, 3A Authorization, Air Quality Major Open Burning Permit.

The project proponent has submitted the necessary DNRC water rights information and change application (available upon request from the contact listed at the end of this EA).

DEQ has jurisdiction over the public water supply and compliance of this project and DEQ approval of plans and specifications of the project is pending, but DEQ has indicated approval is imminent.

3. ALTERNATIVE DEVELOPMENT:

Describe alternatives considered and, if applicable, provide brief description of how the alternatives were developed. List alternatives that were considered but eliminated from further analysis and why. Include the No Action alternative.

From Great West Alternatives Analysis Planning document:

Alternative P-1 – New Pumphouse Building and Existing Booster Pumps and Well Source Replacement (Proposed Alternative)

With alternative P-1, a new pumphouse building will be constructed and the existing pumps will be utilized to the extent possible. Pumps 1 & 6 do not currently operate and will not be utilized. The

existing SCADA and VFD components will be transferred into the new building. In addition, the project proposes to construct a new deep aquifer production well to replace the three shallow aquifer wells that have been recently taken offline (as they are not producing water), to meet system demands to improve the Association's resilience to climate change. Approximately 1,400 lineal feet of new 8" transmission main will be required for the new production well.

The piping has been reconfigured for this alternative to include by-pass pumping for standard maintenance and operator flexibility with easy access to simply take any pump offline. A disinfection equipment room has been incorporated into the new building should the Association need to incorporate disinfection treatment into their system in the future.

The existing booster pumps that are currently used and will remain in use are pumps 2 (15 Hp), 3 (25 Hp), 4 (25 Hp) and 5 (25 Hp). A new Pump 2A (20 Hp) will be installed in the new booster pump configuration. This system will continue to operate as the existing booster system operates in terms of demand and pressure. The booster system operates as described below:

- Pump 2 turns on to maintain the operating pressure of 64 psi, if the pump fails maintain pressure then pump 5 turns on at 59 psi, pump 4 turns on at 57 psi and pump 3 turns on at 55 psi.

Based on existing utility billing records, the pumps cost an average of $2,000 per month to operate, using approximately 16,700 KWH per month. However, during summer months usage is higher, using approximately 41,000 KWH per month at an average cost of $5,000. The utility rates are expected to be similar in the future.

In addition to new piping and a new pumphouse building, a new generator and automatic transfer switch are included in this alternative. Currently, the Association does not have a backup generator during power outages.

Alternative P-1 generally includes the following:

- Constructing a new pumphouse building,
- Moving existing booster pumps, SCADA and VFD panels into the new building,
- New piping, valves and flow meters,
- Removing pumps 6 and pump 1, and installing a new pump 2A,
- Replacing mercury switch monitors for tank levels with a pressure transducer level read,
- New piping configuration to bypass pumps for routine maintenance and service,
- New backup generator and automatic transfer switch for pumphouse, booster pumps, and Well #6,
- Electrical and mechanical equipment for the new building.
- Drill new deep aquifer well, develop well, well casing and completion.
- Install new well pump, valve vault and appurtenances.
- Construct new 1,400 8" transmission main.
- Electrical and instrumentation control improvements

Alternative P-2 – Existing Pumphouse Upgrade

Generally, the existing building would be used and the existing booster pumps. Due to the age of the facility components the majority of the piping, fittings, valving and building electrical, mechanical and structural components will need to be replaced. The piping would have to be re-routed and the use of the concrete channel would be eliminated.

As noted, this alternative includes using the existing booster pumps with the recently installed VFDs. Pump 2 is a 15 Hp pump, while pumps 3, 4 and 5 are 25 Hp. Based on existing utility billing records, the pumps cost an average of $2,000 per month to operate, using approximately 16,700 KWH per month. However, during summer months usage is higher, using approximately 41,000 KWH per month at an average cost of $5,000. The utility rates are expected to be similar in the future.

Alternative P-2 generally includes the following:

- Using existing building footprint,
- Using existing booster pumps,
- Replacing valves, flow meters and mercury switch monitors for tank levels,
- New piping configuration to bypass pumps for routine maintenance and service,
- Building modifications, rerouting piping and eliminating narrow floor pipe channel,
- New backup generator and automatic transfer switch,
- Electrical, mechanical and structural upgrades to the building.

Alternative P-3 – New Pumphouse Building and New Packaged Booster Pumps

With alternative P-3, a new pumphouse building will be constructed and a new package booster pump system will be installed. The existing pumphouse and pumps will be abandoned and disconnected from the supply and distribution system. The existing SCADA will be transferred to the new building and modified as needed to include the new packaged system. The packaged booster systems are typically constructed with control panels that can be incorporated into the existing SCADA system. The packaged pump skid is constructed with new controls and VFDs which maximize system efficiency and operations. It is likely the VFDs that were installed in 2018 on the 25 hp pumps will not be able to be used. The piping for this alternative includes by-pass pumping for standard maintenance and operator flexibility with easy access to simply take any pump offline. The building will feature taller ceilings and wide utility access doors to allow for convenient access to piping and pumps. A disinfection equipment room has been incorporated into the new building should the Association need to incorporate disinfection treatment into their system.

The new booster packaged have been preliminary sized and may change slightly during the design process. In general, the packaged booster system will consist of the following:

- One 20 hp pump, rated for a flow of 300 gpm at 150 feet of head
- Three 40 hp pumps, rated for a flow of 750 gpm at 150 feet of head
- One 50 hp dedicated fire flow pump, rated for a flow of 2,000 gpm at 47 feet of head

The booster package system will be designed to operate the system at existing pressures of 64 psi with a minimum operating pressure of 55 psi. Based on existing utility billing records, the existing booster pumps cost an average of $2,000 per month to operate, using approximately 16,700 KWH per month. However, during summer months usage is higher, using approximately 41,000 KWH per month at an average cost of $5,000. Average annual utility costs range from approximately $30,000 to $38,000 per year. The new booster package pumps cost approximately $28,000 per year to operate

based on existing usage data. The pumps will include VFD's and it is expected to reduce the power usage by approximately 20%, resulting in a project annual savings of $5,000. Eastgate would also benefit from having new pumps with an operating life of 20 plus years and less maintenance due to new pumps.

In addition to new piping and a new pumphouse building, a new generator and automatic transfer switch are included in this alternative. Currently, the Association does not have a backup generator during power outages.

Alternative P-3 generally includes the following:

- Constructing a new pumphouse building
- Moving existing SCADA controls and panels into the new building,
- New packaged booster pump system
- New piping, valves and flow meters
- Replacing mercury switch monitors for tank levels with a modern level read,
- New piping configuration to bypass pumps for routine maintenance and service,
- New backup generator and automatic transfer switch,
- Electrical, mechanical for the new building.

Alternative P-4 – Elevated Water Tank

Alternative P-4 would abandon the existing on-grade storage tank and booster system pumps. A new elevated water tank with a minimum storage capacity of 250,000 gallons would be installed. The elevated tank would supply hydraulic pressure to the system and would not require pumping or a backup generator for the pumping system.

Based on a preliminary hydraulic water model, the elevated tank will be 135 feet tall (from existing ground elevations) to provide 50-75 psi throughout the system. Due to the height, initial conversations were had with the Nancy Kriston of the local FAA office. The Association will need to file form 7460-1 prior to final design and may be required to construct the tank with special lighting and or colors.

In addition to the new elevated tank, the existing well pumps will have to be replaced to pump against the additional approximate 100 feet of head. There is a section of transmission main between well #4a and the water tank that is 8" pipe from the well and then is downsized existing 6" transmission main before entering the tank. As part of this alternative, the section of approximately 1,090 feet of 6" main would be replaced with 8" main. Replacing this section would reduce the head required to pump against and could ultimately allow the existing well pump to be used in this area. The cost estimate provided for this alternative includes replacing five out of the six submersible well pumps while installing approximately 1,090 feet of 8" transmission main.

There are three main types of elevated tanks that are commonly constructed in Montana. They are composite tanks, legged steel tanks and single pedestal spheroid tanks.

Composite Elevated Tanks

A composite elevated tank is a single concrete pedestal supporting a welded steel tank. Composite tanks require a relatively small construction footprint, have an interior ladder and have less painted

surface area to maintain than a legged steel tank. Composite tanks typically an economical option for tanks that are 500,000 gallons or larger. As noted, composite tanks have single concrete pedestal, which requires approximately twice as long to construct as a legged steel tank.

The cost for a composite elevated tank for Eastgate is approximately $1,200,000. This cost is a general cost for this type of tank. A detailed cost estimate of the total construction cost for installing a new elevated tank is outlined at the end of this section.

Single Pedestal / Spheroid Elevated Tanks

A single pedestal/spheroid elevated tank is a single welded steel pedestal supporting a welded steel tank. Pedestal/spheroid tanks require a relatively small construction footprint, have an interior ladder for easier access in inclement weather. The single pedestal design has a minimal visual impact and simplicity that keeps pipes insulated and reduces risk for unauthorized access. They have more surface area to coat than a composite elevated tank. Pedestal/Spheroid tanks are typically an economical option for tanks that are 150,000 to 2,000,000 gallons.

The cost for a pedestal/spheroid elevated tank for Eastgate is approximately $900,000. This cost is a general cost for this type of tank. A detailed cost estimate of the total construction cost for installing a new elevated tank is outlined at the end of this section.

Legged (Multi-Leg) Steel Elevated Tanks

A multi-leg elevated steel tank is the most cost-effective choice for most communities. The tank consists of a welded steel tank supported by multiple welded steel legs, perimeter columns, and a central welded steel riser. These are typically reinforced with horizontal struts and diagonal bracing rods. Most multi-column designs also feature an exterior balcony, a structural member that allows easier inspection and maintenance of the tank container. Multi-leg tanks typically require power washing and coating every five years. There are also added costs in insulating the exposed water main. They have more surface area to coat and maintain than a composite elevated tank or spheroid elevated tank. Multileg Steel tanks are typically an economical option for tanks that are 50,000 to 2,000,000 gallons.

The cost for a multi-leg elevated steel tank for Eastgate is approximately $750,000. This cost is a general cost for this type of tank. A detailed cost estimate of the total construction cost for installing a new elevated tank is outlined at the end of this section.

Alternative P-4 – Elevated Water Tank (Multi-Leg Elevated Steel Tank)

For further alternative analysis comparison of an elevated tank (alternative P-4) versus the booster system a multi-leg elevated steel tank was used.

Alternative P-4 generally includes the following:

- Constructing a new multi-leg elevated steel tank,
- Abandoning the existing on-grade storage tank,
- Abandoning the existing pumphouse and booster pumps,
- Replacing the existing submersible well pumps for high head submersible pumps,
- New piping, fittings and piping configuration for tank bypass piping for routine maintenance and service,

- Electrical and SCADA upgrades

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify direct, indirect, and cumulative effects to soils.

The project area is a developed subdivision with flat topography. The soils where construction is proposed is primarily Yamacall-Attewan loams with 0 to 2 percent slopes. The project area has already been disturbed and altered by human development.

Proposed Alternative – There is no expected impact to the soils/geology as the construction of a replacement water supply well and the installation of new water line will have little to no impact on suitability of the soils. The project proponent will restore any areas disturbed during construction to their preconstruction conditions.

No Action – No impact to the geology and/or soil quality given the area has already been disturbed by human development.

5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify direct, indirect, and cumulative effects to water resources.

There are no surface waters within the project area. Storm runoff from the area would be typical of residential areas.

The aquifer within in the project area is typical of the Helena Valley. The aquifer is a semiconfined aquifer comprised of alluvial and lacrustine sediment deposits of gravels, sands, and clays. There are several clay layers that exist in portions of the project area. The average static water levels in the immediate area is approximately 190 feet. The three wells currently in use range in screened depths from 400 to 700 feet below the ground surface, and the typical historical production from these wells range from 250 to 400 GPM.

Proposed Alternative – Potentially adverse, cumulative impacts to the groundwater. While the construction of a replacement drinking water will not exceed the current water rights of the community; however, any prolonged use a groundwater source could potentially reduce the water level in the aquifer. Additional development outside of the project area but within the aquifer could contribute to depletion of the aquifer. Long term impacts on the aquifer is not expected to occur.

There is expected to be little to no impact on stormwater runoff. During construction, the contractor will be required to put together a Storm Water Pollution Prevention Plan (SWPPP) and acquire the

required permits for construction.

No Action – No impact to surface or groundwaters as there would not be any additional groundwater development for drinking water purposes.

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6. AIR QUALITY:

What pollutants or particulate would be produced (i.e. particulate matter from road use or harvesting, slash pile burning, prescribed burning, etc)? Identify the Airshed and Impact Zone (if any) according to the Montana/Idaho Airshed Group. Identify direct, indirect, and cumulative effects to air quality.

There are several industrial, commercial, and waste disposal sites within several miles of the project area such as a landfill and metal processing plant.

Proposed Alternative – Potentially adverse, direct impacts to air quality as there may be some dust introduced into the environment during construction. The contractor will be required to provide dust control throughout construction to mitigate any dust.

No Action – No impact to air quality.

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7. VEGETATION COVER, QUANTITY AND QUALITY:

What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify direct, indirect, and cumulative effects to vegetation.

The project area is primarily within a developed, residential area and contains only a minimal amount of Rocky Mountain Lower Montane, Foothill, and Valley Grassland. According to the Montana Natural Heritage Program Environmental Summary, there have been no plant species of concern listed as occurring the proposed project area. Maintained lawns for residences and parks do exist in the project area.

Proposed Alternative & No Action – No impact as there is limited natural, undisturbed vegetation cover in the immediate project area.

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8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:

Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify direct, indirect, and cumulative effects to fish and wildlife.

The project area is primarily within a developed, residential area and contains only a minimal amount of Rocky Mountain Lower Montane, Foothill, and Valley Grassland. Records from the Montana Natural Heritage Program Environmental Summary show Great Blue Heron (Species of Concern; MTBA) and Veery (Species of Concern; MTBA) as having occurred in the project area.

Proposed Alternative – Potentially no to minimal impacts given the project area is largely comprised of developed residential area. The primary disturbance will likely occur on private lawns; however, destruction will be minimal, and contractor is expected to restore any damage done to private residences.

No Action – No impact to terrestrial, avian, or aquatic life and habitats.

9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:
Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify direct, indirect, and cumulative effects to these species and their habitat.

According to the Montana Natural Heritage Program, there are no endangered plants in the area. The project area does not provide habitat to any wildlife species of concern that may inhabit the surrounding region.

Floodplains
The project area is entirely within Zone X and has a minimal risk of flooding. There is a Zone A drainage that is within a mile of the project area.

Wetlands
The wetlands within the project area are located at the north end of the Eastgate Village development. The freshwater emergent wetland and freshwater pond that US Fish and Wildlife list in the National Wetlands Inventory are the lagoons used by the community to treat wastewater. A freshwater emergent wetland does run along the northeastern border of the project area. Beyond the project area there are several riverine areas that run from south to north within a mile of the project area.

Proposed Alternative -- Since the developed land does not provide habitat to any known species of concern, the minimal disturbance caused by the project should not impact any sensitive environmental resources. No construction would occur near the flood zone outside of the project area. The land would be restored to preconstruction conditions, so no impact to any floodplains should occur. The proposed construction would not occur near the identified wetlands and are not expected to be impacted by construction.

No Action – No impact to unique, endangered, fragile or limited environmental resources.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:
Identify and determine direct, indirect, and cumulative effects to historical, archaeological or paleontological resources.

The project proponent has not implemented a cultural survey; however, they did reach out to the Montana State Historic Preservation Office (SHPO). SHPO indicated there were no listed cultural records for the project area, but there have been other cultural surveys completed for the greater area.

Proposed Alternative – No cultural or historical resource impacts are anticipated. However, if previously unknown cultural or paleontological materials are identified during project related activities, all work will cease until a professional assessment of such resources can be made.

No Action – No impact to historical or archaeological sites.

11. AESTHETICS:

Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify direct, indirect, and cumulative effects to aesthetics.

The subdivision in the project area is comprised mostly single-family homes on 0.2 acre lots.

The roads within the project area are local roads that allow residents access to the subdivision and residences. Highway 12 is less than a mile south of the project area.

Proposed Alternative – Potentially adverse, cumulative impacts as a chain-link fence will constructed around the well in the future. This fence may have a minor negative effect on visual quality. Overall, the proposed construction during this project is not anticipated to affect the visual quality because the site will be restored by the end of the project. The noise above the subdivision's typical level will most likely be produced during construction. To minimize the impact of this disturbance, the contractor will only work within the hours of 7 AM to 7 PM. The increased noise will only be temporary and a minor disturbance. The proposed project will not produce any glare or fumes.

No Action – No impact to aesthetics.

12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:

Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify direct, indirect, and cumulative effects to environmental resources.

The current water system has 4 centrifugal pumps acting as boosters. There is also a 35 hp pump dedicated to fire flows.

Proposed Alternative – Potentially adverse, cumulative impacts as for future construction phases, booster pumps will be upgraded, and an emergency backup generator will be added. The additional power consumption will be a minor adverse effect.

No Action – No impacts on demands of various environmental resources.

13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:

List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.

The consultant as provided a completed DNRC Environmental Checklist and Agency Comment letters.

Great West Engineering. 2019. Eastgate Water and Sewer User's Association Water Supply System Alternatives Analysis.

IV. IMPACTS ON THE HUMAN POPULATION

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

14. HUMAN HEALTH AND SAFETY:

Identify any health and safety risks posed by the project.

The Eastgate Village subdivision is a primarily residential area and contains powerlines and other potentially hazardous utilities. There are no known regulated underground storage tanks or other hazardous materials/sources within the project area.

Proposed Alternative – Potentially direct adverse impact as heavy equipment would be used during construction of the proposed well and future improvements. Operation of heavy equipment poses a potential threat to public safety. There should be no impact during construction, but the typical risk to the public's safety is slightly increased only during construction. The proposed construction of a replacement well does not conflict with any known utilities. Construction will not be completed within the minimum offset for existing utilities, so no impact is expected.

No Action – Well production for the Eastgate subdivision has diminished significantly with the current well system. Thus, no improvements to the water supply system for the subdivision would pose a drinking water supply risk to the local residential area.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

Identify how the project would add to or alter these activities.

There is no agricultural lands, commercial, or industrial facilities within the project area. Outside the project area there is land used for grazing and an application site for the wastewater treatment plant just north of the project area.

Proposed Alternative & No Action – Potentially not impact as these services do not exist in the project area and therefore would not be affected by the replacement of the water supply well.

16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:

Estimate the number of jobs the project would create, move or eliminate. Identify direct, indirect, and cumulative effects to the employment market.

The project area consists of primarily private residences and a public school. In 2019, 69.2% of East Helena resident's income was partially or entirely based on earnings. There was 37% of the household income collected from social security, and 10.3% of residents who claimed food stamp/SNAP benefits. There are likely some small businesses operated out of some residences.

Proposed Alternative – Potentially beneficial as the construction of the proposed well and future improvements may bring local job opportunities that were not previously present. The proposed water well may have a minor positive impact on employment.

No Action – No impact to quantity or distribution of employment.

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17. LOCAL AND STATE TAX BASE AND TAX REVENUES:

Estimate tax revenue the project would create or eliminate. Identify direct, indirect, and cumulative effects to taxes and revenue.

The property assessment for tax purposes in the project area range from $150,000-$250,000 for single family homes in the area.

Proposed Alternative & No Action – Potentially no impact as the project is a replacement well and no change of tax revenues or bases would be expected.

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18. DEMAND FOR GOVERNMENT SERVICES:

Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify direct, indirect, and cumulative effects of this and other projects on government services

The project area contains mostly private residences. The Eastgate Elementary School and subdivision's wastewater treatment plant are the only non-residences of the project area. The only transportation network present in the project area are the local roads which connect residences and provide access to the subdivision.

Proposed Alternative & No Action – Potentially no impact as there are no facilities that would be impacted by the well replacement. The proposed well replacement will not occur in conflict with any of the local roads. When the well is connected in the future construction will occur in a local road's alignment. During construction, the contractor will be required to create a traffic control plan to allow residents to move through the project area. Any disruptions in traffic flow would be minimal in later construction phases.

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19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:

List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.

The Eastgate Village Water and Sewer Association's water supply currently fails to meet the maximum daily demand of the users in the system during high usage months.

Proposed Alternative – Potentially beneficial, cumulative impacts as the replacement of a failing drinking water well supply system.

No Action – The current system is not meeting the demand of the local residences during the high usage months and will continue to decline. If upgrades are not made in the near future, the system will likely fail, and the local residences will be in critical need for drinking water.

20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:
Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify direct, indirect, and cumulative effects to recreational and wilderness activities.

There is a park and sports field that is accessible to the public within the project area.

Proposed Alternative – Potentially adverse, direct impacts as the proposed replacement well will be constructed on the public park. A fence will be constructed around the well inf the future. This fence will only surround the well which is a relatively small footprint compared to the park, and the public's access to the park will not be restricted.

No Action – No impact to access to or quality of recreational/wilderness activities.

21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:
Estimate population changes and additional housing the project would require. Identify direct, indirect, and cumulative effects to population and housing.

Property within the project area has already been developed with primarily single-family homes with an average occupancy of 2.75. The subdivision that the project area covers provides primarily single-family homes and several four plex structures.

The land used within the project area has been almost fully developed for residential needs. Limited growth is expected in the future, and the EGWSA does not provide service outside of their district.

Proposed Alternative & No Action – Potentially no impact as the proposed replacement of the water supply well is not expected to cause any changes in population demographics or housing conditions.

22. SOCIAL STRUCTURES AND MORE:
Identify potential disruption of native or traditional lifestyles or communities.

Social conduct, structures, and behaviors follow conventions that are typical of Helena Valley.

Proposed Alternative & No Action – No impact or change in social structures are expected to occur as a result of the well replacement.

23. CULTURAL UNIQUENESS AND DIVERSITY:
How would the action affect any unique quality of the area?

There are no unique facilitates of unique culture or diversity in the project area.

Proposed Alternative & No Action -- The proposed project is not expected to affect any cultural facilities.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:

Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify direct, indirect, and cumulative economic and social effects likely to occur as a result of the proposed action.

The median household income in East Helena was $51,831 in 2019. Most residents earn between $25,000 and $99,999.

Proposed Alternative & No Action – Potentially no impact given the nature of the project is a well replacement and no additional income would be expected to occur as a result of this project.

25. DRINKING WATER AND/OR CLEAN WATER

Identify potential impacts to water and/or sewer infrastructure (e.g., community water supply, stormwater, sewage system, solid waste management) and identify direct, indirect, and cumulative effects likely to occur as a result of the proposed action.

Sewer/Sanitation
The Eastgate Village Water and Sewer Association currently uses a central gravity collection system to transport sewage to the treatment plant at the north end of the project area. In addition, solid waste from residences is currently collected and taken to Lewis and Clark County's landfill. There is no stormwater collection system. Stormwater runoff follows the topography of the roads to the leave the area.

Drinking Water/Fire Flows
The current water supply does not meet the maximum water in the demand during summer/high usage months, nor does it meet fire flow demand.

Proposed Alternative – Potentially beneficial, cumulative impact the replacement water supply well will return the water system's ability to meet demands throughout the year. Overcoming the system's deficiencies will be a major improvement. There is no expected impact to the wastewater treatment system as the proposed well replacement is more than 100 feet away than any sewer main. No construction in this phase or future phases should conflict with the sewer system. No impact on wastewater treatment is anticipated.

No Action – The system would continue failing to meet high water usage demand and would eventually decline further, becoming ineffective for the local residents' water supply and demand.

25. ENVIRONMENTAL JUSTICE

Will the proposed project result in disproportionately high or adverse human health or environmental effects on minority or low-income populations per the Environmental Justice Executive Order 12898? Identify potential impacts to and identify direct, indirect, and cumulative effects likely to occur as a result of the proposed action.

The current well sources supply the drinking water for the Eastgate Water and Sewer User's Association.

Proposed Alternative – Potentially no impact as the proposed project will not result in disproportionately high or adverse human health or environmental effects on minority or low-

income populations. The economic impact will ultimately affect all users of the system proportionately. No disproportionate effects among any portion of the community are expected.

No Action – No impact to environmental justice.

EA Prepared By:	**Name:** Demi Blythe **Date:** 7/19/2022 **Title:** CARD Division MEPA/NEPA Coordinator **Email:** Demitra.Blythe@mt.gov

V. FINDING

26. ALTERNATIVE SELECTED:

Alternative P-1 – New Pumphouse Building and Existing Booster Pumps and Well Source Replacement (Proposed Alternative)

With alternative P-1, a new pumphouse building will be constructed and the existing pumps will be utilized to the extent possible. Pumps 1 & 6 do not currently operate and will not be utilized. The existing SCADA and VFD components will be transferred into the new building. In addition, the project proposes to construct a new deep aquifer production well to replace the three shallow aquifer wells that have been recently taken offline (as they are not producing water), to meet system demands to improve the Association's resilience to climate change. Approximately 1,400 lineal feet of new 8" transmission main will be required for the new production well.

27. SIGNIFICANCE OF POTENTIAL IMPACTS:

Groundwater

Any prolonged use a groundwater source could potentially reduce the water level in the aquifer. Additional development outside of the project area but within the aquifer could contribute to depletion of the aquifer. Long term impacts on the aquifer is not expected to occur.

Air Quality

Potentially adverse, direct impacts to air quality as there may be some dust introduced into the environment during construction. The contractor will be required to provide dust control throughout construction to mitigate any dust.

Stormwater

There is expected to be little to no impact on stormwater runoff. During construction, the contractor will be required to put together a Storm Water Pollution Prevention Plan (SWPPP) and acquire the required permits for construction.

Private Property Impacts

The primary disturbance will likely occur on private lawns; however, destruction will be minimal,

and contractor is expected to restore any damage done to private residences.

Floodplains and Wetlands

The land would be restored to preconstruction conditions, so no impact to any floodplains should occur. The proposed construction would not occur near the identified wetlands and are not expected to be impacted by construction.

Aesthetics/Noise

Potentially adverse, cumulative impacts as a chain-link fence will constructed around the well in the future. This fence may have a minor negative effect on visual quality. Overall, the proposed construction during this project is not anticipated to affect the visual quality because the site will be restored by the end of the project. The noise above the subdivision's typical level will most likely be produced during construction. To minimize the impact of this disturbance, the contractor will only work within the hours of 7 AM to 7 PM. The increased noise will only be temporary and a minor disturbance. The proposed project will not produce any glare or fumes.

Energy Consumption

Potentially adverse, cumulative impacts as for future construction phases, booster pumps will be upgraded, and an emergency backup generator will be added. The additional power consumption will be a minor adverse effect.

Public Safety/Access to Recreational Areas

Potentially direct adverse impact as heavy equipment would be used during construction of the proposed well and future improvements. Operation of heavy equipment poses a potential threat to public safety. There should be no impact during construction, but the typical
risk to the public's safety is slightly increased only during construction. The proposed construction of a replacement well does not conflict with any known utilities. Construction will not be completed within the minimum offset for existing utilities, so no impact is expected.
Potentially adverse, direct impacts as the proposed replacement well will be constructed on the public park. A fence will be constructed around the well inf the future. This fence will only surround the well which is a relatively small footprint compared to the park, and the public's access to the park will not be restricted.

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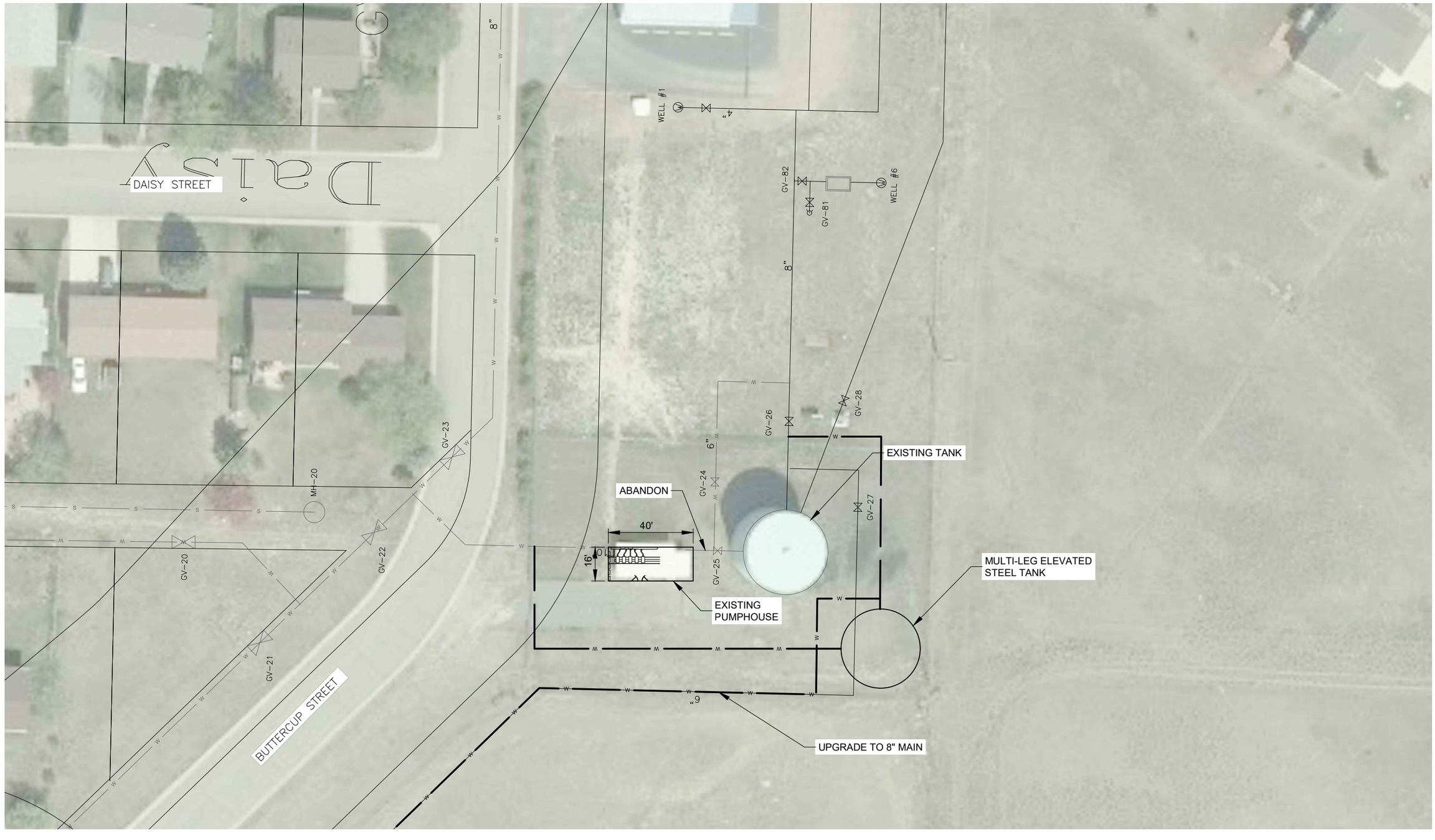
28. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

☐ EIS ☐ More Detailed EA ☒ No Further Analysis

EA Approved By:	**Name:** Mark Bostrom	
	Title: CARD Division Administrator	
Signature: DocuSigned by: Mark W Bostrom BF7A1C56B2AF4DE...	**Date**: 10/5/2022 | 3:57:00 PM MDT	



NOTE: DRAWING NOT TO SCALE

Figure 6
Alternative P-4
Site Plan New Elevated Tank

EASTGATE WATER AND SEWER USERS ASSOCIATION
PUMPHOUSE IMPROVEMENTS

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